USING INDIGENOUS CONTEXTS TO TEACH THE AUSTRALIAN CURRICULUM: SCIENCE

Science teachers can now access a complete suite of resources from Foundation to Year 10 to support them in integrating the Aboriginal and Torres Strait Islander Histories and Cultures cross-curriculum priority into the Science component of the Australian Curriculum. Today, ACARA has published teacher background information for Foundation – Year 6 to complete the resources available.

The resources have been developed in response to feedback from community and educators, for material to support teachers incorporate Aboriginal and Torres Strait Islander Histories and Cultures into teaching the Australian Curriculum: Science.

Building on work completed in 2018 (when ACARA published 95 ‘elaborations’ – practical examples across all three strands of the Science curriculum and all year levels), the final compilation of teacher background information adds additional detail to these elaborations and is now available for use.

The information includes detailed explanations into the cultural and historical significance of each topic and the connection to the core Science curriculum content. It also includes a list of consulted works, provided as evidence of the research undertaken.

ACARA CEO, David de Carvalho, said it was important for students to have the opportunity to engage with our world’s oldest living cultures, and that combining this knowledge and understanding with core scientific concepts would only enhance student learning in a positive way.

“We have a complete research-based, scientifically rigorous teaching resource that supports Foundation to Year 10 teachers of science,” he said. “The elaborations have already proved a useful starting point in enhancing teacher knowledge and enthusiasm about incorporating our Indigenous culture into science.”

Minister for Indigenous Australians, the Hon Ken Wyatt AM MP, welcomed ACARA’s announcement saying it was important that Indigenous Australians have the opportunity to study STEM subjects.
“This initiative will provide practical support and help remove barriers to study, meaning Aboriginal and Torres Strait Islander students can work towards employment opportunities in the growing STEM industry,” Minister Wyatt said.

“Having access to quality education is vital to securing long term job security and economic prosperity.”

In South Australia, work is underway to roll out the elaborations into schools around the state. Local science teachers are working with Aboriginal communities, the South Australian education department, the South Australian Museum and our own staff at ACARA to develop teaching resources and improve teacher cultural awareness.

Sam Tuffnell, Science and STEM Coordinator at Woodville High School, is one of those teachers.

“Aboriginal and Torres Strait Islander peoples are the oldest, continuous living culture in the world and it would be negligent of us as a scientific community to not embed their knowledge in mainstream classroom learning. This is the educational right of all students,” Mr Tuffnell said.

“This project is about working with community and we have the privilege of working with Kaurna/Ngarrindjeri/Narungga Elders who guides us in contextualising these elaborations… This inclusive consultation process is most important as we need to be respectful of the local cultural knowledge we incorporate in these contextualisations. It would be remiss to make generalisations about Aboriginal knowledge.”

Deputy Principal, Mal Jurgs, is another teacher incorporating the elaborations into his science classroom at Meningie Area School.

“I have taught science for over 30 years and from what I have seen of the elaborations, they provide the opportunity for students to see that Aboriginal People applied scientific thinking and processes to develop their ability to live in a variety of environments across Australia,” Mr Jurgs said.

“For me personally, it will allow me to provide a link to the curriculum through which to ‘hook’ my students who identify as Aboriginal. That is not to say that [the elaborations] are a ‘novelty’, I see them as valid ways of delivering the curriculum.”

The F–10 elaborations and teacher background information can be accessed on the Australian Curriculum website, or downloaded as PDFs (F–6 booklet (PDF 4.3mb) and 7–10 booklet (PDF 8.5 mb)).

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For journalists and media

For any media related queries, please call 0414 063 872 or email media.contact@acara.edu.au

Additional quotes for media use

Norwood Morialta High School principal Jacqui Van Ruiten

“We’re a high achieving STEM school and over the past 3 1/2 years, we’ve been implementing a STEM strategy focused on innovation and authentic learning for our students. That’s why we were keen to be involved in bringing Indigenous knowledge into our science lessons. Indigenous communities have so much to offer and we need to celebrate the work that Aboriginal and Torres Strait Islander Peoples have done, and continue to do, as innovators and contributors to STEM for thousands of years. Our teachers appreciate how traditional pedagogy can influence and improve student learning and experience. They value the opportunities to talk to the Elders – understanding the unique tools they’ve used and the application to science, their observations of the natural world, their skills and predictions and hypotheses. It’s igniting an interest within themselves, and I think in turn it will ignite a passion within our students.”

Sam Tuffnell, Science and STEM Coordinator at Woodville High School

“It has created different discussion in science classes. Science is an interdisciplinary subject, so by creating links to other learning areas, we have found that students are developing deeper understanding of the vast traditional knowledge our Aboriginal and Torres Strait Islander peoples hold and its relevance to the contemporary and future challenges faced by Australia.”

Videos for media reference

- Culturally responsive pedagogy
- ACARA CEO vlog: Episode 2, Fanning the flames of wonder